

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1194-15
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	23 <sup>rd</sup> September, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>TP2-0019</b>

**SUBJECT: 22<sup>nd</sup> September, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Material Processing Facility  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 22<sup>nd</sup> of September, 2008. Colin MacIsaac and Tyler Rowe of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Sunny with cloudy periods
- Temperature: approximately 15°C
- Wind Direction: West to Northwest to North

**Comments:** *ALL-TECH was on-Site at 0730 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech's construction activities.*

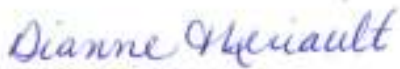
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Colin MacIsaac and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Dianne Theriault, B.Tech  
Environmental Technologist  
**ALL-TECH Environmental Services Cape Breton Ltd.**

Copied via e-mail:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Material Processing Facility**  
**22<sup>nd</sup> September, 2008**

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
1 Walker Street, 35m North of Ferry Street	0810	155	6	West	Upwind	Background	No observations seen to affect sampling integrity
2 140m North of Spar Road, Inglis Street intersection	0810	155	13	West	Downwind	No activity observed on site	No observations seen to affect sampling integrity
3 100m North of Spar Road, Inglis Street intersection	0835	155	10	West	Downwind	Jack hammer operating	No observations seen to effect sampling integrity
4 Walker Street, 35m North of Ferry Street	0900	155	38	West	Upwind	Background	Dust from passing trucks
5 100m North of Spar Road, Inglis Street intersection	0900	155	7	West	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity
6 15m West of Inglis Street, Spar Road intersection	0940	155	5	Northwest	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity
7 200m North of Ferry Street on Railway property	1000	155	10	Northwest	Upwind	Background	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
8 15m West of Inglis Street, Spar Road intersection	1000	155	14	Northwest	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity
9 15m West of Inglis Street, Spar Road intersection	1030	155	11	Northwest	Downwind	No activity observed on site	No observations seen to effect sampling integrity
10 200m North of Ferry Street on Railway property	1100	155	12	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 75m West of Inglis Street, Spar Road intersection	1100	155	14	Northwest	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity
12 75m West of Inglis Street, Spar Road intersection	1125	155	14	North	Downwind	Excavator and jack hammer operating	No observations seen to effect sampling integrity
13 200m North of Ferry Street on Railway property	1200	155	4	North	Upwind	Background	No observations seen to effect sampling integrity
14 75m West of Inglis Street, Spar Road intersection	1200	155	13	North	Downwind	No activity observed on site	No observations seen to affect sampling integrity
15 75m West of Inglis Street, Spar Road intersection	1245	155	27	North	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
16 200m North of Ferry Street on Railway property	1300	155	5	North	Upwind	Background	No observations seen to effect sampling integrity
17 75m West of Inglis Street, Spar Road intersection	1300	155	15	North	Downwind	Excavator and jack hammer operating	No observations seen to effect sampling integrity
18 75m West of Inglis Street, Spar Road intersection	1345	155	14	North	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity
19 200m North of Ferry Street on Railway property	1400	155	10	North	Upwind	Background	No observations seen to effect sampling integrity
20 75m West of Inglis Street, Spar Road intersection	1400	155	22	North	Downwind	Excavator and jack hammer operating	No observations seen to effect sampling integrity
21 75m West of Inglis Street, Spar Road intersection	1445	155	7	North	Downwind	Excavator and jack hammer operating	No observations seen to affect sampling integrity
22 200m North of Ferry Street on Railway property	1500	155	11	North	Upwind	Background	No observations seen to effect sampling integrity
23 75m West of Inglis Street, Spar Road intersection	1500	155	5	North	Downwind	Excavator and jack hammer operating	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
24 75m West of Inglis Street, Spar Road intersection	1545	155	8	North	Downwind	Excavator and jack hammer operating	No observations seen to effect sampling integrity
25 200m North of Ferry Street on Railway property	1600	155	7	North	Upwind	Background	No observations seen to effect sampling integrity
26 75m West of Inglis Street, Spar Road intersection	1600	155	11	North	Downwind	No activity observed on site	No observations seen to effect sampling integrity
27 75m West of Inglis Street, Spar Road intersection	1645	155	10	North	Downwind	No activity observed on site	No observations seen to effect sampling integrity

**Notes:** Air sample duration for each monitoring event was 15 minutes.

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
140m North of Spar Road, Inglis Street intersection	0800 to 0859	12	990
100m North of Spar Road, Inglis Street intersection	0900 to 0959	19	990
15m West of Spar Road, Inglis Street intersection	1000 to 1059	33	990
75m West of Spar Road, Inglis Street intersection	1100 to 1159	47	990
75m West of Spar Road, Inglis Street intersection	1200 to 1259	67	990
75m West of Spar Road, Inglis Street intersection	1300 to 1359	82	990
75m West of Spar Road, Inglis Street intersection	1400 to 1459	97	990
75m West of Spar Road, Inglis Street intersection	1500 to 1559	104	990
75m West of Spar Road, Inglis Street intersection	1600 to 1659	115	990

### VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	